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SEARCH REQUEST FORM 100408

Date: 4 Aug 03 Requester's Full Name: _____ Examiner #: S. DEVI
Art Unit: 1645 Phone (308) 9347 Serial Number: 09/831,061
Results Format Preferred (circle): (PAPER) DISK E-MAIL

MEI

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ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: JEAN-YVES BONNEFOY; SYBILLE LECOANET; JEAN-PIERRE AUBRY; PASCALE JEANNIN

Inventors (please provide full names): THIERRY BAUSSANT

Earliest Priority Date: 11-06-98

Search Topic:
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the cited species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known.

For Sequence Searches Only* Please include all pertinent information (parent, grandchild, divisional, or issued patent numbers) along with the appropriate serial number.

Please ask MS. BEVERLY SHEARS to perform this search.

Please see attached claims with key words highlighted and/or Examples and synonyms provided.
Please include the following databases: Embase, Medline, Biosis, CA (Dialog 50), JAPIO, JICTEplus, Dialog 35, 65, 77, 144, 256, 266, 440, 348, 357, 113, 129, 130, 156 and 60.
Please perform an inventor's name search.

Please also perform a sequence & an interference search for SEQ ID NO: 2 and at least 5 amino acid-containing oligomers.

Thank you. ☺

Please return the attached claims and this search request form along with the search reports.

enterobacterial outer membrane protein A

25. A process of using an enterobacterium OmpA protein, or a fragment thereof, for preparing a composition intended for specific targeting of a biologically active substance, which is associated with it, to antigen-presenting cells, wherein said enterobacterium OmpA protein, or a fragment thereof, is internalized into the antigen-presenting cells.

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26. The process of claim 25, wherein said enterobacterium OmpA protein, or a fragment thereof, binds specifically to antigen-presenting cells.

27. The process of claim 25, wherein said antigen-presenting cells are chosen from dendritic cells, monocytes and B lymphocytes.

28. The process of claim 27, wherein said antigen-presenting cells are dendritic cells.

29. The process of claim 25, wherein said enterobacterium OmpA protein, or a fragment thereof, is obtained from a culture of said enterobacterium, using an extraction process.

30. The process of claim 25, wherein said enterobacterium OmpA protein, or a fragment thereof, is obtained by a recombinant process.

31. The process of claim 25, wherein said enterobacterium is Klebsiella *pneumoniae*.

32. The process of claim 31, wherein the amino acid sequence of said OmpA protein, or a fragment thereof, comprises:

a) the amino acid sequence having sequence SEQ ID No 2;

b) the amino acid sequence of a sequence having at least 80% homology with the sequence SEQ ID No 2; or

c) the amino acid sequence of a fragment, of at least 5 amino acids, of a sequence as defined in a) or b).

33. The process of claim 25, wherein said biologically active substance is chosen from peptides, lipopeptides, polysaccharides, oligosaccharides, nucleic acids, lipids and chemical substances.

34. The process of claim 33, wherein said biologically active substance is coupled by covalent attachment with said OmpA protein, or a fragment thereof.

35. The process of claim 34, wherein the coupling by covalent attachment is chemical coupling.

36. The process of claim 35, wherein one or more attachment elements are introduced into said OmpA protein, or a fragment thereof, and/or into said biologically active substance, in order to facilitate the chemical coupling.

37. The process of claim 36, wherein said attachment element introduced is an amino acid.

38. The process of claim 34, wherein said biologically active substance coupled by covalent attachment with said OmpA protein, or a fragment thereof, is a recombinant chimeric protein resulting from the expression of a nucleic acid construct encoding said biologically active substance and said OmpA protein, or a fragment thereof.

39. The process of claim 38, wherein said biologically active substance is an antigen or a hapten.